

## Anti-Hamartin/TSC1 Antibody Picoband®

Catalog Number: A00365-2

### About TSC1

Hamartin also known as tuberous sclerosis 1 is a protein that in humans is encoded by the TSC1 gene. It is mapped to 9q34.13. This peripheral membrane protein was implicated as a tumor suppressor. It forms a complex with TSC2 that regulates mTORC1 signaling and may be also involved in vesicular transport and docking. Hamartin and TSC2 have critical roles in neuronal polarity, and that a common pathway regulates polarization and growth in neurons and cell size in other tissues. Hamartin is a growth inhibitory protein whose biologic effect is probably dependent on its interaction with tuberin. It also can affect cell proliferation via deregulation of G1 phase. Loss or perturbation of Hamartin function leads to loss of adhesion to the cellular matrix and initiates the development of TSC hamartomas.

### Overview

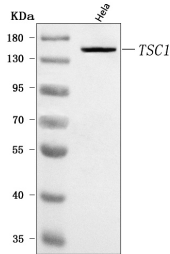
Product Name	Anti-Hamartin/TSC1 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-Hamartin/TSC1 Antibody Picoband® catalog # A00365-2. Tested in ELISA, Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> .
Storage Instructions	At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.
Host	Rabbit
Uniprot ID	Q92574

### Technical Details

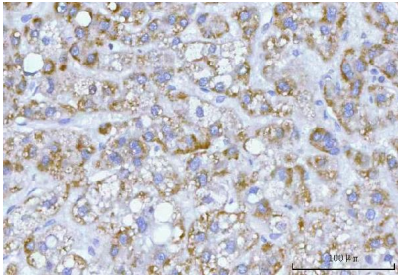
Immunogen	E.coli-derived human Hamartin/TSC1 recombinant protein (Position: M1-H618).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized

Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5 ug/ml, Human Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human Flow Cytometry (Fixed), 1-3 ug/1x10 <sup>6</sup> cells, Human ELISA, 0.1-0.5 ug/ml, -

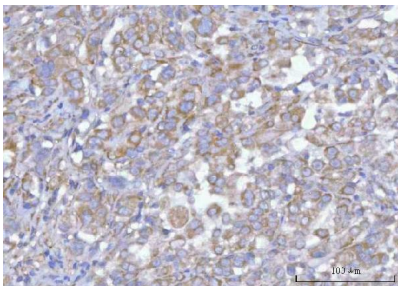
## Anti-Hamartin/TSC1 Antibody Picoband® (A00365-2) Images



Western blot analysis of Hamartin/TSC1 using anti-Hamartin/TSC1 antibody (A00365-2). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human Hela whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Hamartin/TSC1 antigen affinity purified polyclonal antibody (Catalog # A00365-2) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Hamartin/TSC1 at approximately 160 kDa. The expected band size for Hamartin/TSC1 is at 130 kDa.

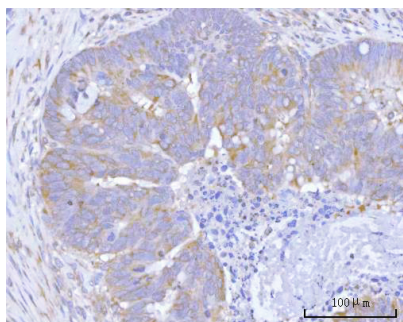


IHC analysis of Hamartin/TSC1 using anti-Hamartin/TSC1 antibody (A00365-2). Hamartin/TSC1 was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Hamartin/TSC1 Antibody (A00365-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

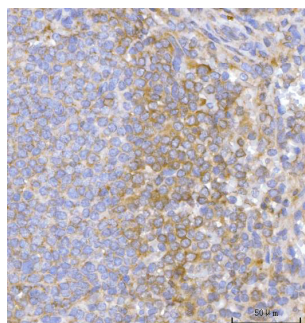


IHC analysis of Hamartin/TSC1 using anti-Hamartin/TSC1 antibody (A00365-2). Hamartin/TSC1 was detected in a paraffin-embedded section of human lung adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Hamartin/TSC1 Antibody (A00365-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

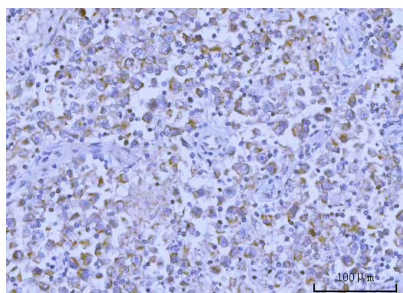
IHC analysis of Hamartin/TSC1 using anti-Hamartin/TSC1 antibody (A00365-2). Hamartin/TSC1 was detected in a paraffin-embedded section of human rectum



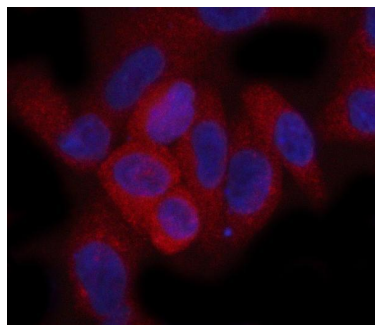
adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Hamartin/TSC1 Antibody (A00365-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of Hamartin/TSC1 using anti-Hamartin/TSC1 antibody (A00365-2). Hamartin/TSC1 was detected in a paraffin-embedded section of human spleen tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Hamartin/TSC1 Antibody (A00365-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

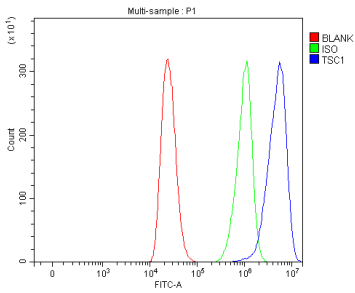


IHC analysis of Hamartin/TSC1 using anti-Hamartin/TSC1 antibody (A00365-2). Hamartin/TSC1 was detected in a paraffin-embedded section of human testicular seminoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Hamartin/TSC1 Antibody (A00365-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IF analysis of Hamartin/TSC1 using anti-Hamartin/TSC1 antibody (A00365-2). Hamartin/TSC1 was detected in an immunocytochemical section of A549 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-Hamartin/TSC1 Antibody (A00365-2) overnight at 4°C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

Flow Cytometry analysis of THP-1 cells using anti-Hamartin/TSC1 antibody (A00365-2). Overlay histogram showing THP-1 cells stained with A00365-2 (Blue line). To facilitate intracellular staining, cells were fixed with 4%



paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Hamartin/TSC1 Antibody (A00365-2, 1 ug/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

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### Anti-Hamartin/TSC1 Antibody

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